

American Tingitoidea (Hemiptera) in the Natural History Museum of Vienna.

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(With 2 textfigures.)

Through the courtesy of Dr. Max Beier of the Natural History Museum of Vienna the writer has been permitted to study a very fine collection of Tingitoidea from South America. This collection of 1,306 specimens is represented by 20 genera and 46 species and varieties, including nine species described below as new to science. Of the new forms, *Acanthocheila hollandi* is represented by 5 specimens, the holotype and allotype being the property of the Carnegie Museum, Pittsburg, Pennsylvania. The types of the rest of the new forms have been deposited in the Naturhistorisches Museum, Wien.

Family Piesmidæ.

Piesma cinerea Say.

Rio Grande do Sul, Brazil, 1 specimen. This is the first published record of the occurrence of this genus in South America.

Family Tingitidæ.

Monanthia monotropidia Stal.

Rio Grande do Sul, Brazil; Centurion, Paraguay. Very long series of specimens.

Monanthia parmata Distant.

S. Bernardino, Paraguay, 8 specimens.

Teleonemia prolixa Stal.

Rio Grande do Sul, Brazil; S. Bernardino and San Luis, Paraguay. This species is represented by several specimens belonging to variety *a* as described by Champion.

Teleonemia luctuosa Stal.

S. Bernardino, Paraguay, 1 female.

Teleonemia scrupulosa Stal.

S. Bernardino, Paraguay, many specimens.

Teleonemia brevicornis Stal.

S. Bernardino, Paraguay, 1 female.

Teleonemia limbata Stal.

San Luis, Paraguay, 4 specimens.

Teleonemia triangularis (Blanchard).

S. Bernardino and Centurion, Paraguay; 2 specimens. The writer has examined a specimen bearing the same data as given in the original description of *triangularis*, probably representing one of Blanchard's cotypes.

Teleonemia chilensis (Reed).

This insect was described as *Cantacader chilensis* Reed, REVISTA CHILENA, IV, 1909, p. 180 (Reprint, p. 87) from Chile. It belongs to the same division of the genus *Teleonemia* as *carmelana* Berg. Specimens have been examined from Chile, Argentine, Peru, and Brazil. A Chilean specimen, determined by the late Dr. Edwyn C. Reed, probably represents a cotype. In the latter the paranota and costal areas of elytra are almost entirely biseriate. The Vienna collection contains two specimens, one from San Luis and the other from Centurion, Paraguay.

Teleonemia chilensis elata, n. var.

Differs from typical *chilensis* as determined by Reed by its larger size, longer spines on the head, and broader paranota and elytra. Paranota strongly expanded and reflexed, with four to five rows of areolae at its widest part. Hood larger than in *chilensis*, but very similar in shape; carinae slightly more elevated, the lateral carinae also strongly constricted. Costal area strongly expanded, mostly triseriate, some places irregularly tri-quadriseriate. Color and markings very similar to typical examples of *chilensis*.

Length, 5.21 mm; width, 2.31 mm.

Holotype (male) and allotype (female), Rio Grande do Sul, Brazil. Paratypes, taken with type, also from San Paula and Chapada, Brazil; and from San Luis and S. Bernardino, Paraguay.

Teleonemia spectabilis Drake.

Chaco, Paraguay, many examples.

Teleonemia carmelana (Berg).

This species was described as *Leptostyla carmelana* Berg, ANN. SOC. ARG., XXXIV, 1892, p. 200 (Reprint, p. 99), from Uruguay. *Teleonemia simulane* Drake (MEM. CARN. MUS., IX, 1922, p. 358) is a synonym of this species. Heretofore, *carmelana* has always been treated as belonging to the distinctly lacy group of Tingitidae of the genus *Leptostyla* Stal (= *Leptopharsa* Stal). It is, however, a true *Teleonemia*, belonging to the section having broadly expanded costal and pronotal margins. The Vienna collection contains three specimens from Chaco, Paraguay, collected by Fiebrig. Other examples are also at hand from Argentine. The writer is indebted to Dr. Carlos Bruch for a very fine photograph of Berg's type of *carmelana*.

Amblystira silvicola Drake.

Chaco and S. Bernardino, Paraguay, several examples.

Sphaerocysta globifera Stal.

Rio Grande do Sul, Brazil, very long series of specimens.

Sphaerocysta inflata Stal.

Rio Grande do Sul, Brazil; Chaco, Rio Negro, Paraguay.

Tingis americana Drake.

S. Bernardino, Paraguay, many examples.

Tingis beieri, n. sp.

Elongate-ovate, testaceous, with some of the nervelets infusate, clothed with numerous long fine hairs. Head black, armed with five, short, blunt, testaceous spines. Antennae moderately long, brownish to ferruginous, clothed with long hairs; segment I slightly stouter and a little longer than two; III two times as long as four, becoming slightly slender apically, obliquely truncate at apex; IV slightly enlarged, sometimes considerably darkened. Body beneath black, more or less aeneous in appearance, clothed with numerous long fine hairs. Rostrum brownish, reaching to the end of metasternum; rostral channel open behind, the laminae widely separated on meso- and metasterna. Legs hairy, ferruginous.

Pronotum moderately swollen, coarsely pitted, black, the triangular portion reticulate and brownish testaceous, tricarinate, the carinae indistinctly areolate; lateral carinae slightly less raised than median, brownish testaceous, slightly divaricating posteriorly.

Hood small, brownish testaceous, scarcely produced anteriorly. Paranota strongly reflexed, brownish testaceous, sub-angulate opposite humeri, mostly triseriate, the areolae moderately large. Elytra broad, broadly rounded behind; costal area broad, with four to five rows of areolae; subcostal area narrower, with three to four confused rows of areolae; discoidal area large, broad, bounded by a prominent costate nervure, the outer margin curved, extending considerably beyond the middle of elytra, about seven or eight cells deep at widest part. Wings considerably longer than abdomen, clouded.

Length, 3.61 mm; width, 1.90 mm.

Holotype (male), allotype (female), S. Bernardino, Paraguay. Paratypes, 15 specimens, from Rio Grando do Sul, Brazil, and type locality. The writer is indebted to Mr. W. E. China of the British Museum for comparing this species with *Tingis* (*Lasiotropis*) *ciliaris* Puton of Europe, from which it differs in smaller size, more slender and relatively longer antennae, less dilated paranota, with finer and denser pilosity and the hood more compressed laterally. *T. beieri* is another striking example showing the extraordinary relationship between the South American (Paraguay and Argentine) fauna and that of the eastern Mediterranean region.

Corycera comptula Drake.

Chaco, Paraguay, 6 specimens. These show a little variation in the length of the three frontal spines. Known heretofore only from the type locality, Chapada, Brazil.

Corycera spissa, n. sp. (Fig. 1).

Small, rather slender, black, the elytra brownish black. Antennae pale testaceous; segment I brown, slightly thicker and a little longer than two; IV slightly embrowned, a little more than one-third the length of three. Antenniferous tubercles very large, blunt, curved inwardly, black. Head black, strongly tumid above; the three anterior, blunt, hornlike spines slightly directed downwards and just reaching to the end of first segment of antennae; posterior spines brown, blunt, appressed, extending forward to the anterior margin of the eyes. Rostrum extending between intermediate coxae, testaceous, its tip darker; rostral channel gradually widening posteriorly, open behind.

Body beneath black. Legs slender, testaceous, the tarsi darker. Pronotum considerably swollen, somewhat rugulose, coarsely pitted, black, the triangular process lighter, with larger cells; paranota carina-like, the areolae very small, fairly distinct along anterior portion; collum very distinct. Carinae very distinct, without distinct areolae; lateral spines carinae slightly divaricating anteriorly. Elytra broadly rounded behind; costal area carina-like, without distinct areolae; subcostal area biseriate, the areolae fairly small; discoidal area deeply impressed, narrowed at both base and apex, mostly triseriate, widest a little behind the middle.

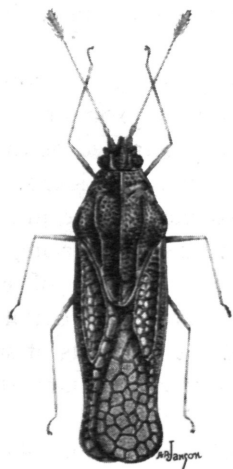


Fig. 1. *Corycera spissa*, n. sp. (Type).

Apex of triangular process of pronotum broadly rounded; wings clouded, a little longer than abdomen. Male claspers strongly curved, brown.

Length, 2.51 mm; width, 0.72 mm.

Holotype (male), allotype (female), S. Bernardino, Paraguay. Paratypes, 4 specimens, taken with type. The type is figured. The characters of the paranota, costal area of elytra and carinae separate this species from its congeners.

Tigava semota Drake.

S. Bernardino, Paraguay, 1 male.

Camplotingis lenatis, n. sp.

Elongate, narrow, brownish testaceous, with a few fuscous markings. Head black, tumid; median spine moderately slender, sharp, blackish, arising from tumid elevation, porrect, extending to the middle of first antennal segment; anterior pair testaceous, shorter, converging anteriorly; hind pair long, testaceous appressed, extending to base of antennae. Middle and hind coxae widely separated; rostral laminae cordate on metasternum. Antennae long, slender; segment I brownish black, stout, three times the length of two; II short and slightly lighter in color; III, long, slender, testaceous, three times the length of four; IV becoming smaller towards tip, black, testaceous at base. Rostrum extending to anterior coxae.

Pronotum moderately swollen, closely and deeply pitted, the calli distinct; carinae very prominent, without distinct areolae, the lateral carinae faintly constricted at the base of posterior lobe. Paranota carina-like, strongly reflexed, the areolae indistinct. Elytra slightly constricted beyond the middle; costal area narrow, uniseriate, subcostal area mostly biseriate, triseriate at widest part; discoidal area not reaching middle of elytra, mostly triseriate; some of the transverse nervures of costal area, the basal portion of discoidal and many of the nervelets of sutural area dark fuscous. Legs long, slender, testaceous, the tarsi darker.

Length, 2.80 mm; width, 0.72 mm.

Holotype, male, S. Bernardino, Paraguay. Paratype, taken with type. This species is most closely related to *C. mollis* D. and B. from Brazil; distinguishable by its lighter color, more strong elevated carinae and paranota. The head is also more tumid above between the eyes.

Camplotingis tantilla, n. sp. (Fig. 2).

Elongate, brownish testaceous, with fuscous markings. Head brown, tumid and produced anteriorly; median spine arising from tumid area, projecting forward, brownish, rather stout, blunt, extending to the middle of first antennal segment; anterior pair shorter, slenderer, converging; posterior pair very stout, long, blunt, appressed, directed forward, extending to the base of the antennae, testaceous; eyes brownish black, large, transverse. Pronotum brownish testaceous, moderately tumid, closely pitted,

tricarinate; median carinae thicker and more strongly raised, with a few small areolae opposite calli; lateral carinae distinct, parallel, without any trace of areolae; collum prominent, deeply pitted; paranota carina-like.

Elytra longer than abdomen, broadly rounded at apex, slightly constricted behind middle; costal area carina-like, without areolae; subcostal area, narrow, mostly biseriate, triseriate at widest part;



Fig. 2. *Camplotingis tantilla*, n. sp. (Type).

areolae small, circular in outline; discoidal area not quite reaching the middle of the elytra, widest beyond the middle, with dark fuscous area at apex, mostly triseriate; subcostal area with some of the nervelets infuscate. Wings extending a little beyond the tip of abdomen. Body beneath black. Legs slender, testaceous, the tarsi brown. Antennae long, slender, segment I dark reddish brown, rather long, stout, three time the length of two, the latter short, slenderer and similar in color; III long, slender, testaceous, a little more than four times the length of four; IV considerably swollen, black, the basal portion testaceous. Rostral channel narrow

on pro- and mesosterna, strongly widened posteriorly; on the metasternum, open behind; rostrum extending between intermediate coxae.

Length, 2.92 mm; width, 0.76 mm.

Holotype, male, S. Bernardino, Paraguay. Paratype, taken with type. The carinae and paranota separate this species at once from known member of the genus.

Zatingis extraria Drake.

S. Bernardino, Paraguay, 7 specimens. This is the type locality.

Acanthocheila hollandi, n. sp.

Allied to *A. tumida* Drake, but much smaller, the median carina less elevated, and the tumid elevation much smaller. Head dark brown, the spines wanting. Antennae long, moderately slender, brownish testaceous, clothed with numerous long bristly hairs; segment I stout, less than two times as long as two, the latter slenderer; III long, twice as long as four. Rostrum not quite reaching to the end of the mesosternum. Bucculae greatly reduced, open in front. Legs widely separated on meso and metasterna, dark testaceous.

Pronotum moderately swollen, uniformly and deeply pitted, dark brown to brownish black; median carina very distinct; triangular process becoming lighter towards apex, these not notched. Paranota narrow, uniseriate, testaceous, considerably reflexed; lateral margins clothed with numerous long fine hairs and armed with 6—9 long sharp spines. Elytra with basal half (except costal area) dark brown to fuscous, sparsely clothed (also pronotum) with fine, long, erect hairs; costal area biseriate at base, uniseriate at middle and then biseriate; costal margin beset with numerous long fine hairs and long spines, both becoming shorter distally. Wings longer than abdomen. Female broader than the male. Body beneath dark reddish brown to almost black.

Length 2.56 mm; width, 1.20—1.35 mm.

Holotype (female) and allotype (male), Chapalo, Brazil, collected by H. H. Smith, Carnegie Museum, Pittsburgh, Penn., U. S. A. Paratypes: 2 specimens from S. Bernardino, Bolivia; and 1 from Matta Grosso, Brazil. This insect is named in honor of the late Dr. W. J. Holland, who has taken a special interest in the insect fauna of South America.

Megalocysta championi Drake.

Brazil, 1 male specimen.

Leptocysta sexnebulosa Stal.

Chaco, Rio Negro, Paraguay, 4 specimens.

Leptocysta novatis Drake.

S. Bernardino, Paraguay, 3 specimens.

Leptodictya perita, n. sp.

Head black, with five, long, slender, sharp, testaceous, brown-tipped spines; median spine very long, porrect, slightly longer than first antennal segment; anterior pair a little shorter, directed forward and usually slightly divaricating; posterior pair subequal in length to median, directed forward and curved outwards. Antennae long, slender, indistinctly pilose, segments I and II dark fuscous to blackish, the first slightly stouter and two and a half times as long as two; III very long and slender, testaceous to brownish, about three and a third times as long as four; IV slightly enlarged, pilose, blackish, a small basal portion testaceous or brown. Legs long, slender, testaceous, sometimes brownish, the tarsi darker. Rostral laminae and bucculae strongly foliaceous, testaceous; rostrum brownish, its tip darker, extending on the metasternum.

Pronotum moderately tumid, coarsely and closely punctate, dark brown to almost black, becoming lighter on the triangular portion; carinae foliaceous, testaceous, median more strongly raised in front, and there biseriate (mostly uniseriate); lateral carinae parallel, uniseriate, the areolae rather small. Paranota testaceous, strongly reflex as in the subgenus *Hanuala* Kirkaldy, the edge of the folded portion resting on the sides of the pronotum. Hood sharply triangular, moderately large, faintly produced in front, testaceous. Some of the nervelets partly embrowned. Elytra divaricating posteriorly, their tips separated, the lateral margins curved and finely serrate; costal area very broad, irregularly reticulate, with the three or four obliquely transverse nervures slightly enlarged and embrowned; the veinlets largely testaceous, except from one to three rows along the sides brown, the marginal nervure largely fuscous, the areolae mostly hyaline, some of the cells along the lateral margin partially embrowned; discoidal area elongate, narrowed at both base and apex, the nervures dark

fuscous, the areolae moderately large, with five rows at widest part; sutural area with some of the nervures part'y embrowned.

Length, 3.62 mm; width, 1.78 mm.

Holotype (male) and allotype (female), Rio Grande do Sul, Brazil. Paratypes, 3 specimens, taken with type.

Leptobyrsa elegantula Drake.

Rio Grande do Sul, Brazil, 3 specimens.

Leptopharsa magnifica Drake.

Rio Grande do Sul, Brazil; S. Bernardino, Paraguay, many examples.

Leptopharsa albella, n. sp.

Elongate, whitish testaceous. Head short, tumid in front; median spine stout, moderately long, curved downwards; anterior pair shorter, turned inwardly; posterior pair appressed, stout, blunt, reaching to the anterior margin of the eyes. Antennae very long, slender; segment I and II slightly embrowned, the first slightly thicker and nearly three times as long as two; III very long, slender, testaceous, three times as long as four; IV black, a little shorter than the first two taken together. Rostrum just reaching to intermediate coxae; rostral laminae widely separated on meso- and metasterna. Eyes black.

Pronotum closely and finely punctate, closely areolated behind, tricarinate; median carina not very distinctly areolate, the areolae becoming distinct behind; lateral carinae slightly less elevated, without cells, parallel. Collum prominent; faintly produced at the middle in front, finely reticulate. Paranota moderately wide, strongly reflexed, biseriate in front, uniseriate behind. Elytra faintly constricted behind the middle, rounded behind; costal area biseriate, the areolae moderately large and mostly pentagonal in form; subcostal area narrower, mostly biseriate, triseriate at widest place; discoidal area not reaching middle of elytra, with five rows of areolae at widest part, with brown spot at apex. Wings longer than abdomen. Legs testaceous, the tarsi brown.

Length, 2.81 mm; width, 0.92 mm.

Holotype (male) and allotype (female), S. Bernardino, Paraguay, collected by Fiebrig. Paratypes, 4 specimens, taken with the type. Allied to *Leptopharsa illudens* Drake but easily separated

from it by the longer antennae, more tumid and larger spines on the head.

Gargaphia lunulata Mayr.

The type (female, Rio de Janeiro, Novara Exp.) from Mayr's collection is before me. In addition the Vienna-Museum collection contains many specimens from S. Bernardino, Paraguay. *Gargaphia lasciva* Gibson (Trans. Amer. Ent. Soc., XLV, 1919, p. 198) from Para, Brazil, is a synonym of *lunulata* Mayr. *G. lunulata* is a very common tingitid in Brazil.

Gargaphia differatis, n. sp.

Elongate, moderately broad, testaceous, the markings brown to dark fuscous. Pronotum moderately swollen, coarsely punctate, brown, the triangular portion mostly testaceous; tricarinate; carinae considerably raised, testaceous, each composed of a single row of rather large cells; lateral carinae faintly constructed at middle. Hood large, strongly compressed, projecting anteriorly to base of antennae, testaceous, with a large dark fuscous spot behind. Paranota broad, strongly reflexed, its outer margin somewhat rounded and indistinctly serrate, largely triseriate, the areolae moderately large. Head brown, armed with five long slender spines; median spine longer, porrect, reaching almost to the end of the second antennal segment; anterior pair projecting inwardly, reaching beyond middle of the first segment of antennae; posterior pair longer than anterior pair, divaricating. Bucculae well developed, brown, margined with testaceous. Rostrum reaching almost to the transverse laminae; rostral laminae broad, testaceous.

Body beneath brown. Elytra moderately divaricating posteriorly, faintly constricted beyond the middle, their tips separated and somewhat sharply rounded, with a broad, oblique, dark-fuscous band (areolae and nervelets) behind, the band in a depressed furrow-like area; costal area broad, widely reticulated, triseriate, with larger areolae along outer margin, with two or three of the transverse nerves somewhat embrowned, the outer margin finely serrate, subcostal area broad, mostly quadriseriate, the areolae much smaller; discoidal area rather narrow, long, not reaching middle of elytra; the nerve between subcostal and discoidal areas sharply raised a little before apex, there embrowned or fuscous and forming a small, compressed, tumid-like elevation.

Wing a little longer than abdomen. Legs long, slender, testaceous, the tips of tarsi brown. Antennae long slender, indistinctly pilose; segment I dark brown, considerably swollen; II short, testaceous, one-third of the length of two; III testaceous, very long and slender; IV slender, mostly black, the base testaceous, slightly more than one-third of the length of three, finely pilose. Claspers large and strongly curved in male.

Length, 3.31 mm; width, 1.70 mm.

Holotype, male, and allotype, female, S. Bernardino, Paraguay. Paratype, 3 specimens, taken with type.

Gargaphia oreades Drake.

Rio Grande do Sul, Brazil, very many specimens.

Gargaphia decoris Drake.

Rio Grande do Sul, Brazil, extremely long series of specimens.

Gargaphia torresi Costa Lima.

Brazil, 1 specimen.

Gargaphia munda Stal.

Rio Grande do Sul, Brazil, 1 specimen.

Gargaphia penningtoni Drake.

S. Bernardino, Paraguay, many specimens.

Gargaphia nigrinervis Stal.

Venezuela; Rio Frio, Colombia, 2 specimens.

Corythaica monancha Stal.

S. Bernardino, Paraguay, numerous specimens.

Corythaica planaria Uhler.

Rio Grande do Sul, Brazil, extremely long series of specimens.

Corythucha fuscomaculata Stal.

Minas Geraes and Sao Paulo, Brazil, 2 examples.

Dicysta vitrea Champion.

San Luis and S. Bernardino, Paraguay, 2 specimens.